202301UECM1404OE1a

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Review of preview

Started on	Monday, 6 February 2023, 01:01 PM
Completed on	Monday, 6 February 2023, 01:01 PM
Time taken	9 secs
Grade	**0** out of a maximum of 10 (**0**%)

1
Marks: 1

Simon deposits 14,000 in a bank. During the first year, the bank credits an annual effective rate of interest i. During the second year, the bank credits an annual effective rate of interest (i-4%). At the end of two years, he has 15,400.00 in the bank. Calculate i. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.069
Marks for this submission: 0/1.

2
Marks: 1

Money accumulates in a fund at an effective annual interest rate of i during the first 8 years, and at an effective annual interest rate of 3.5i thereafter. A deposit of 1 is made into the fund at time 0. It accumulates to 5.69 at the end of 20 years and to 11.74 at the end of 26 years. What is the value of deposit at the end of 13 years? _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 2.441386
Marks for this submission: 0/1.

3
Marks: 1

An investor puts 140 into Fund X and 140 into Fund Y. Fund Y earns compound interest at the annual rate of j > 0, and Fund X earns simple interest at the annual rate of 1.07j. At the end of 2 years, the amount in Fund Y is equal to the amount in Fund X. Calculate the amount in Fund Y at the end of 6 years. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 307.296167
Marks for this submission: 0/1.

4
Marks: 1

Jeremy borrows 2,000 from Becky at an anuual effective rate of interest i. He agrees to pay back 2,000 after 9 years and 4,871.0152 after another 9 years. Three years after his first payment, Jeremy repays the outstanding balance. What is the amount of Jeremy's second payment? _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 2934.354337
Marks for this submission: 0/1.

5
Marks: 1

At an annual effective interest rate of i, $i > 0$, the following are all equal:

- the present value of 11,000 at the end of 8 years;
- the sum of the present values of 5,600 at the end of year t and 50,000 at the end of year $2t$; and
- 6,260.30 immediately.

Calculate the present value of a payment of 7,000 at the end of year $t+1$ using the same annual effective interest rate. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 1971.797721
Marks for this submission: 0/1.

6
Marks: 1

A deposit of 240 is made into a fund which pays an annual effective interest rate of 6% for 14 years. At the same time, 120 is deposited into another fund which pays an annual effective rate of discount of d for 14 years. The amounts of interest earned over the 14 years are equal for both funds. Calculate d. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 0.086002
Marks for this submission: 0/1.

7
Marks: 1

A loan of 8,000 is made at an interest rate of 8% compounded quaterly. The loan is to be repaid with three payments: 3,200 at the end of first year, 6,400 at the end of 4-th year, and the balance at the end of the tenth year. Calculate the amount of final payment. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 842.679412
Marks for this submission: 0/1.

8
Marks: 1

Brian and Jenny each take out a loan of X. You are given:

- Jenny will repay her loan by making one payment of 1100 at the end of year 25. Brian will repay his loan by making one payment of 2100 at the end of year 25.
- The nominal rate of interest convertible monthly being charged to Jenny is exactly one-half the nominal rate of interest convertible monthly being charged to Brian.

Calculate X. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 575.802254
Marks for this submission: 0/1.

9
Marks: 1

Fund P accumulates at a nominal rate of interest of 4%, compounded semiannually. Fund Q accumulates at a nominal rate of discount of 7%, compounded quarterly. If 2,000 is put into each fund, what is the difference (Fund Q - Fund P) after two years? _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 138.536533
Marks for this submission: 0/1.

10
Marks: 1

Investment A for 270,000 is invested at a nominal rate of interest, j, convertible semiannually. After 5 years, it accumulates to 876,776.68.
Investment B for 270,000 is invested at a nominal rate of discount, k, convertible quarterly. After 3 years, it accumulates to 1,210,005.09.
Investment C for 270,000 is invested at an annual effective rate of interest equal to j in year one and an annual effective rate of discount equal to k in year two.
Calculate the value of investment C at the end of two years. _____

Answer:

Make comment or override grade

Incorrect
Correct answer: 636792.45283
Marks for this submission: 0/1.